

CLAIMS

The embodiments of the invention in which an exclusive property or right is claimed are defined as follows. Having thus described the invention

5 what is claimed is:

1. A sensor apparatus, comprising:

a sensor element located on a base;

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a cover located proximate to said base, wherein said cover comprises a sensor diaphragm and a dimple that form a part of said cover; and

15 a flanged area formed to a bottom portion of said cover, wherein said flanged area provides a surface for contacting a fixture to which said sensor apparatus attaches and holding said sensor apparatus to said fixture in a manner which prevents said sensor diaphragm from contacting said fixture and inducing errors during sensor operations thereof.

20 2. The sensor apparatus of claim 1 wherein said flanged area is connected to and surrounds said bottom portion of said cover and is further positioned parallel to said sensor diaphragm.

25 3. The sensor apparatus of claim 1 wherein said dimple is formed from and incorporated into said cover.

4. The apparatus of claim 1 wherein said cover comprises a pressure transducer sensor diaphragm.

30 5. The apparatus of claim 1 wherein said sensor element comprises quartz.

6. The apparatus of claim 1 wherein said sensor element comprises ceramic.
7. The apparatus of claim 1 wherein said sensor element comprises 5 silicon.
8. The apparatus of claim 1 wherein said sensor apparatus comprises a pressure sensor.
- 10 9. The apparatus of claim 1 wherein said sensor apparatus comprises a surface acoustic wave (SAW) pressure sensor.
10. A pressure sensor apparatus, comprising:
 - 15 a sensor element located on a base, wherein said sensor element comprises at least one of the following materials: ceramic, silicon and quartz;
 - 20 a cover located proximate to said base, wherein said cover comprises a sensor diaphragm and a dimple that form a part of said cover, wherein said dimple is formed from and incorporated into said cover; and
 - 25 a flanged area formed to a bottom portion of said cover, wherein said flanged area is connected to and surrounds said bottom portion of said cover and is positioned parallel to said sensor diaphragm, and such that said flanged area provides a surface for contacting a fixture to which said sensor apparatus attaches and holding said sensor apparatus to said fixture in a manner which prevents said sensor diaphragm from contacting said fixture and inducing errors during sensor operations thereof.
- 30 11. A sensor method, comprising the steps of:
 - locating a sensor element on a base;

positioning a cover proximate to said base, wherein said cover comprises a sensor diaphragm and a dimple that form a part of said cover; and

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10 forming a flanged area at a bottom portion of said cover, wherein said flanged area provides a surface for contacting a fixture to which said sensor apparatus attaches and holding said sensor apparatus to said fixture in a manner which prevents said sensor diaphragm from contacting said fixture and inducing errors during sensor operations thereof.

12. The method of claim 11 further comprising the step of connecting said flanged area said bottom portion of said cover.

15 13. The method of claim 12 further comprising the steps of:

surrounding said bottom portion of said cover with said flanged area; and

20 positioning said flanged area parallel to said sensor diaphragm.

14. The method of claim 11 further comprising the step of:

forming said dimple from and incorporating into said cover.

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15. The method of claim 11 further comprising the step of:

configuring said cover to comprise a pressure transducer sensor diaphragm.

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16. The method of claim 11 wherein said sensor element comprises quartz.

17. The method of claim 11 wherein said sensor element comprises ceramic.
- 5 18. The method of claim 11 wherein said sensor element comprises silicon.
19. The method of claim 11 wherein said sensor apparatus comprises a pressure sensor.
- 10 20. The method of claim 11 wherein said sensor apparatus comprises a surface acoustic wave (SAW) pressure sensor.